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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER				
BOLOTIN, DMITRIY				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/591,819

Applicant(s)

BARTON, DANIEL JOSEPH

Examiner

Dmitriy Bolotin

Art Unit

2629

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7-11, 14, 16-21, 25, 39, 40 and 42-44 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-11, 14, 16-21, 25, 39, 40 and 42-44 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 09/06/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

It would be of great assistance to the Office if all incoming papers pertaining to a filed application carried the following items:

1. Application number (checked for accuracy, including series code and serial no.).
2. Group art unit number (copied from most recent Office communication).
3. Filing date.
4. Name of the examiner who prepared the most recent Office action.
5. Title of invention.
6. Confirmation number (See MPEP § 503).

Specification

1. The **abstract** of the disclosure is objected to because it is more than 150 words.

Correction is required. See MPEP § 608.01(b).

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

1. **Claim 2** is objected to because of the following informalities: Word "colour" on line 3 of claim 2 should be replaced with word --color--. Appropriate correction is required.
2. **Claim 14** is objected to because of the following informalities: Word "polarised" on line 2 of claim 14 should be replaced with word --polarized--. Appropriate correction is required.
3. **Claim 16** is objected to because of the following informalities: Word "utilised" on line 2 of claim 16 should be replaced with word -- utilized --. Appropriate correction is required.
4. **Claim 17** is objected to because of the following informalities: Word "utilised" on line 2 of claim 17 should be replaced with word -- utilized --. Appropriate correction is required.
5. **Claim 39** is objected to because of the following informalities: Word "utilised" on line 3 of claim 39 should be replaced with word -- utilized --. Appropriate correction is required.
6. **Claim 40** is objected to because of the following informalities: Word "utilised" on line 8 of claim 40 should be replaced with word -- utilized --. Appropriate correction is required.
7. **Claim 40** is objected to because of the following informalities: Phrase "A optical" on line 1 of claim 40 should be replaced with phrase -- An optical --. Appropriate correction is required.

8. **Claim 40** is objected to because of the following informalities: Phrase "and or" on line 6 of claim 40 should be replaced with phrase -- and/or --. Appropriate correction is required.
9. **Claim 42** is objected to because of the following informalities: Word "utilised" on line 2 of claim 42 should be replaced with word -- utilized --. Appropriate correction is required.
10. **Claim 44** is objected to because of the following informalities: Word "colour" on line 4 of claim 44 should be replaced with word --color--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. **Claim 39** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding **claim 39**, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. **Claims 1 – 4, 7 – 11, 14, 16 – 21, 25, 39, 40, 42 - 44** are rejected under 35 U.S.C. 103(a) as being unpatentable over Eugenio (GB 2,379,493 A) in view of Pryor (US 6,766,036).

As to **claim 1**, Eugenio discloses a data collection system having: (a) at least one sensing means to detect and receive a visible light signal (camera 5 of fig. 1); (b) an optical characteristic recognition processing means (analyzing means 6 of fig. 1) which receives signals from said at least one sensing means (camera 5 of fig. 1); (c) at least one optical signal means (control member 4 of fig. 1) associated with a respective one of said sensing means (camera 5 of fig. 1) which generates, reflects or transmits visible light (the position of control member is determined by the camera means, (page 1, lines 24 – 25), inherently visible light is reflected from the control member onto camera means) to said sensing means (camera 5 of fig. 1); wherein said optical signal means (control member 4 of fig. 1) causes an optical characteristic to be visible to, or sensed by, said sensing means (the position of control member is determined by the camera means, (page 1, lines 24 – 25)), said optical characteristic being caused to change when the relative angle between said sensing means and said at least one optical

signal means is changed (control member 4 of fig. 1 can be moved in space relative to the camera means 5 of fig. 1, the camera means detects the position of control member, (page 5, lines 8 – 20)), whereby change in said optical characteristic is processed by said processing means (analyzing means 6 of fig. 1) to identify a physical or other characteristic of said at least one optical signal means (page 5, lines 20 – 25), and

Eugenio fails to disclose that said at least one optical signal means includes at least one of a holographic system, a lenticular system and a polarized filter system.

In the same field of endeavor, Pryor discloses optical signal means (reflective grating 440 of fig. 4B) includes a holographic system (holographic grating, col. 8, line 62 – col. 9, line 3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Eugenio by adding a holographic grating to control member in order to detect the location of objects held by a person (Pryor, col. 2, lines 7 – 11).

As to **claim 2** (dependent on 1), Eugenio discloses a system, wherein said optical characteristic includes a shape (crossed shape as shown in fig. 2).

As to **claim 3** (dependent on 1), Eugenio discloses a system, wherein said physical or other characteristic of said at least one optical signal means (control member 4 of fig. 1) is a change in angle of orientation (page 4, lines 20 – 27) between

said at least one optical signal means (control member 4 of fig. 1) and said at least one sensing means (camera 5 of fig. 1).

As to **claim 4** (dependent on 3), Eugenio discloses a system, wherein said change in angle of orientation is communicated to a CPU (microprocessor, page 5, lines 21 – 23) for use in processing to identify or quantify the change in angular orientation (page 5, lines 30 – 31) between said at least one sensing means (camera 5 of fig. 1) and said at least one optical signal means (control member 4 of fig. 1).

As to **claim 7** (dependent on 1), Eugenio discloses a system as, wherein said at least one sensing means (camera 5 of fig. 1) does not change its orientation or position relative to earth (camera 5 of fig. 1 is mounted on the console 1 of fig. 1, page 5, lines 14 – 20, inherently the camera is stationary).

As to **claim 8** (dependent on 1), Eugenio discloses a system, wherein said at least one optical signal means (control member 4 of fig. 1) is positioned on an object the orientation of which is being sensed (control means which comprises control member 4 of fig. 1, page 4, lines 20 - 27) relative to said at least one sensing means' orientation or position (camera means 5 of fig. 1).

As to **claim 9** (dependent on 1), **claim 10** (dependent on 1) and **claim 11** (dependent on 1), Eugenio fails to disclose a system, wherein said at least one optical signal means is at a stationary reference point, wherein said at least one optical signal means does not change its position relative to earth and wherein said at least one

sensing means is positioned on an object the orientation of which is being sensed relative to said at least one optical signal means' orientation.

However, it would have been obvious to one of ordinary skill in the art at the time of the invention to interchange the locations of the camera and reflective member in the system of Eugenio by locating the camera on the game controller and the member on the console in order to provide an alternative means for tracking the movement of the game controller, since such modification would have been within a skill of an artisan.

As to **claim 14** (dependent on 1), **claim 16** (dependent on 1), **claim 17** (dependent on 16) and **claim 18** (dependent on 17), Eugenio discloses a system, wherein said system has at least one image associated therewith (images 12, 13, 14 and 15 of fig. 2), wherein more than one system (four spokes 8,9,10 and 11 of fig. 2) is utilized with respective images (images 12, 13, 14 and 15 of fig. 2) viewable in a respective one of said more than one system when viewed from different orientations (camera can detect images when controller is rotated, page, 5, lines 8 – 12). Eugenio also discloses a system, wherein multiple systems are used with the columnar direction of each respective system being at a different angle to each of the other systems (spokes 8, 9, 10 and 11 of plastic member 4 of fig. 2 are disposed at different angles to each other as shown in fig. 2).

Eugenio fails to disclose the system is one of a holographic system, a lenticular system and a polarized filter system comprising columnar lenticules.

In the same field of endeavor, Pryor discloses the system for tracking movement which is a holographic system (system comprising holographic grating, col. 8, line 62 – col. 9, line 3) such holographic grating system inherently comprises columnar strips.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Eugenio by adding a holographic grating disclosed by Pryor, in order to better identify the movement of an object held by a person (Pryor, col. 2, lines 7 – 11).

Eugenio in view of Prior do not disclose a lenticular system, however a holographic system and a lenticular system are equivalent and holographic strips are equivalent to columnar lenticules.

As to **claim 19** (dependent on 1), **claim 20** (dependent on 1) and **claim 21** (dependent on 20), Eugenio discloses a system, wherein said at least one optical signal means is made up of a plurality of systems (spokes 8, 9, 10 and 11 of control member 4 of fig. 2), with each system being located in substantially the same planar orientation (as shown in fig. 2) and one or more system (the circular character 15 of fig. 2) being located in a different planar orientation to the rest of the systems (in comparison to the rest of the spokes, the character is indented as shown in fig. 2), wherein a plurality of systems are used (spokes 8, 9, 10 and 11 of fig. 2) wherein an angular spacing between columnar spokes on a first system relative to one or more other systems is in the range of 45 degrees to 120 degrees (As shown in fig. 2, 8 and 9 are at 90 degrees to each other).

Eugenio fails to disclose the system is a lenticular system and a polarized filter system comprising columnar lenticules.

In the same field of endeavor, Pryor discloses the system for tracking movement which is a holographic system (system comprising holographic grating, col. 8, line 62 – col. 9, line 3) such holographic grating system inherently comprises columnar strips.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Eugenio by adding a holographic grating disclosed by Pryor, in order to better identify the movement of an object held by a person (Pryor, col. 2, lines 7 – 11).

Eugenio in view of Prior do not disclose a lenticular system, however a holographic system and a lenticular system are equivalent and holographic strips are equivalent to columnar lenticules.

As to **claim 25** (dependent on 1), Eugenio discloses a system, wherein said at least one optical signal means (control member 4 of fig. 1) is located within a distinctively shaped panel or border to form a target (control member 4 of fig. 2, comprises a plastic member heaving four spokes 8, 9, 10 and 11 of fig. 2, page 4, lines 29 – 31).

As to **claim 39** (dependent on 1), Eugenio discloses a gaming system such as a computer based, console based, arcade based gaming system (game consol, page 2, lines 1 – 4), wherein a system, is utilized to provide orientation data to at least one of a

control system for said gaming system to allow access to said gaming system (page 2, lines 1 – 4).

As to **claim 40**, Eugenio discloses an optical signal panel (control member 4 of fig. 1) for use in an object orientation data collection system (page 2, lines 1 – 4), said optical signal panel including a plurality of optical signal means (control member may comprise at least two spokes radiating from a center axis, col. 2, lines 5 – 10) which independently or in association with each other produce a change in a visible signal emanating from said panel (light reflects from the control member 4 of fig. 1 and is detected by the camera means 5 of fig. 1), said signal being adapted to be processed by a signal processing means (analyzing means 6 of fig. 1) to identify and or quantify a direction of change in orientation of said panel (control member 4 of fig. 1) relative to a sensing means (page 5, lines 8 - 12) which senses said optical signal (camera means 5 of fig. 1),

Eugenio fails to disclose said panel utilizes at least one of a holographic system, a lenticular system and a polarized filter system.

In the same field of endeavor, Pryor discloses a panel (440 of fig. 4B) which a holographic system (holographic grating, col. 8, line 62 – col. 9, line 3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Eugenio by adding a holographic grating to the panel in order to detect the location of objects held by a person (Pryor, col. 2, lines 7 – 11).

As to **claim 42** (dependent on 40), **claim 43** (dependent on 42) and **claim 44** (dependent on 40), Eugenio discloses a panel, wherein at least two systems are utilized (spokes 8,9,10 and 11 of plastic member 4 of fig. 2) having their respective columnar orientations at an angle to each other (as shown in fig. 2, the spokes are at an angle to each other), wherein no two systems (in the case where two spokes are provided, page 2, lines 5 – 10) have the same columnar orientation on said panel (both are radiating from the central axis, therefore having different orientation, page 2, lines 5 – 10) and wherein said panel includes a shape (shape of a circle 15 of fig. 2) visible through at least one system (spoke 10 of fig. 2)

Eugenio fails to disclose that the system is a lenticular system.

In the same field of endeavor, Pryor discloses a system comprising holographic grating (col. 8, line 62 – col. 9, line 3) which is equivalent to a lenticular pattern.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Eugenio by adding the holographic or the lenticular grating disclosed by Pryor, so as to be able to better detect the movement of the game controller (Pryor, col. 2, lines 7 – 11).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Bolotin whose telephone number is (571)270-

5873. The examiner can normally be reached on Monday-Friday, 8:00 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on (571)272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. B./
Examiner, Art Unit 2629

/Amare Mengistu/
Supervisory Patent Examiner, Art Unit 2629